

t39_complex2
(TMYQZ8UsEM4VAnHSmy85gP7TGtnv4P9JC4D)

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Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_numbers : \iota$ be given. Let $k1_complex2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_complex1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k15_complex1 : \iota \Rightarrow \iota$ be given. Let $k3_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} \forall X0.(m1_subset_1 X0 k2_numbers) \Rightarrow (\forall X1.(m1_subset_1 \\ X1 k2_numbers) \Rightarrow (\forall X2.(m1_subset_1 X2 k2_numbers) \Rightarrow (k1_complex2 \\ X0 (k9_complex1 X1 X2) = k9_complex1 (k15_complex1 X1) (k1_complex2 \\ X0 X2)))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} \forall X0.(m1_subset_1 X0 k2_numbers) \Rightarrow (\forall X1.(m1_subset_1 \\ X1 k2_numbers) \Rightarrow (\forall X2.(m1_subset_1 X2 k2_numbers) \Rightarrow (k1_complex2 \\ (k9_complex1 X0 X1) X2 = k9_complex1 X0 (k1_complex2 X1 X2)))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.((m1_subset_1 X0 k2_numbers) \wedge (m1_subset_1 \\ X1 k2_numbers)) \Rightarrow (k9_complex1 X0 X1 = k3_xcmplx_0 X0 X1) \end{aligned} \tag{3}$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (k15_complex1 (k15_complex1 X0) = X0) \tag{4}$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.((v1_xcmplx_0 X0) \wedge (v1_xcmplx_0 X1)) \Rightarrow (\\ m1_subset_1 (k1_complex2 X0 X1) k2_numbers) \end{aligned} \tag{5}$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (m1_subset_1 (k15_complex1 X0) k2_numbers) \tag{6}$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k2_numbers) \Rightarrow (v1_xcmplx_0 X0) \tag{7}$$

Theorem 1

$$\begin{aligned} & \forall X0.(m1_subset_1\ X0\ k2_numbers) \Rightarrow (\forall X1.(m1_subset_1 \\ & X1\ k2_numbers) \Rightarrow (\forall X2.(m1_subset_1\ X2\ k2_numbers) \Rightarrow (k1_complex2 \\ & (k9_complex1\ X0\ X1)\ X2 = k1_complex2\ X1\ (k9_complex1\ (k15_complex1 \\ & X0)\ X2)))) \end{aligned}$$